



Hybrid Electric Vehicles

August 2009

For government purchasers

Publication No. 13-07-006

Responsible Purchasing Attributes

- ☒ Air quality
- ☒ Climate change
- ☒ Energy efficiency

Benefits of Purchasing

- ☒ Cost savings.
- ☒ Reduced fuel consumption.
- ☒ Improved air quality.
- ☒ Reduced greenhouse gas emissions.

How to Buy

Hybrid vehicles are available on State Contract [44908](#).

Electric vehicles are available on [AD502](#) and [AD505](#).

Goal: To procure and use the most fuel efficient vehicles available.

Improving the fuel efficiency of government fleets is paramount to the state's economy and environment. Not only does it save money as fuel prices increase, it reduces greenhouse gas emissions that contribute to climate change. For every gallon of gasoline consumed, 20 pounds of carbon dioxide are released into the atmosphere.

Reductions in fuel use also improve air quality. Vehicles contribute roughly half of the air pollution produced in Washington State.

A couple of green vehicle technologies are available: hybrid-electric and electric vehicles. Hybrid-electric vehicles (HEVs) combine the conventional internal combustion engine with an electric motor and batteries. Electric vehicles (EVs) have batteries that store electricity for consumption.

Since 2000, state and local government agencies have purchased more than 1,000 HEVs in Washington. HEVs attain twice the fuel economy of the conventional vehicles.

New vehicle technology is emerging. Prius-based plug-in, hybrid-electric vehicles (PHEVs) average between 65-95 miles per gallon (mpg), with short periods of highway driving at well over 100 mpg. PHEVs are a step above hybrids in both fuel efficiency and reduced emissions. New York State is demonstrating how states can move ahead with this technology (see story below).

Standards

The U.S. Environmental Protection Agency (EPA) developed [Light-Duty Vehicle Emissions Standards](#) from 1968 through 2006. The list provides limits to greenhouse gas emissions at different ages of the vehicle's life.



Leading the Way – New York State

In 2006, New York State initiated a pilot project to convert 600 hybrid-electric vehicles to plug-in, hybrid-electric vehicles.

The purpose of the project is to evaluate and demonstrate the use of PHEVs in agency fleets to reduce fuel consumption and encourage adoption of this new technology.

This project is led by the [New York State Energy Research and Development Authority \(NYSERDA\)](#). Preliminary results indicate that the fuel efficiency after the conversion doubles.

Environmentally Preferable Purchasing

The Department of Ecology offers tools and resources to make environmentally preferable purchasing easier.

Find out about environmentally preferable products, standards and certifications, law and directives, and more at our website:

<http://www.ecy.wa.gov/programs/swfa/epp/>

Contact:

Tina Simcich

tina.simcich@ecy.wa.gov

Resources

[U.S. Department of Energy](#)

[Department of Ecology's Clean Car Information Page](#)

[U.S. EPA Green Vehicle Guide](#)

[Intellichoice](#)

[New York State Energy Research and Development Authority](#)

[Responsible Purchasing Network](#)

Product Performance

Hybrid electric vehicles are equal in performance to conventional vehicles. Hybrids excel in stop and go traffic and coasting because they operate in electric mode during low-speed applications.

Electric vehicles perform well within their limitations of 35 miles per hour top speed.

Plug-in hybrid-electric vehicles will likely be the best option because they can be driven at higher speeds like a gasoline-powered vehicle.

If purchasing new alternatively-fueled vehicles is not an option, consider removing heavy fuel-consuming vehicles from the fleet.



Photo Courtesy of [Hybrid Vehicles](#)

End of Life

State-owned vehicles are sold through government surplus at their end-of-life. The end-of-life is based on mileage and age of vehicle.

Laws and Directives

Executive Order 05-01 Establishing Sustainability and Efficiency Goals for State Operations	State agencies shall give priority to the purchase of hybrid gas/electric and other fuel efficient/low emission vehicles. Agencies shall give priority to the replacement of pre-1996 vehicles.
Executive Order 02-03 Sustainable Practices by State Agencies	Requires sustainable practices by state agencies. This includes practices that do not sacrifice the needs of future generations.
RCW 43.19.637 Executive Order 02-03	Clean fuel vehicle purchase requirements: 1. At least thirty percent of all new vehicles purchased through a state contract shall be clean-fuel vehicles. 2. The percentage of clean-fuel vehicles purchased through a state contract shall increase five percent each year.
RCW 70.120A.010	The legislature adopted California's motor vehicle emissions standards in Title 13 of California's Code of Regulations.